

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013647**Date Inspected:** 27-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspector: Mr. Xu Tao

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Xiao Xulin, stencil 201760 has recently used the shielded metal arc welding process to make a temporary tack weld on the floor beam that is located below OBG segment 11EE deck plate DP3003-001. This temporary plate appears to be intended to be used as a place to install a jack to assist in aligning DP3003-001 into position prior to final welding. This QA Inspector asked ABF representative Mr. Tang You Qing if the base material where this tack weld was made had been preheated prior to welding. Mr. Tang You Qing informed this QA Inspector that the minimum required preheat of this base material is 10 degrees Celsius and since the ambient temperature is above 50 degrees Celsius that no additional preheating was required. This QA Inspector observed that Mr. Xiao Xulin appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC workers were performing heat straightening of OBG deck plate DP3028(A)-001 adjacent to where DP3029(A)-001 is to be welded. This QA Inspector asked ABF representative

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Mr. Tang You Qing if ZPMC has obtained engineering approval to perform this heat straightening and Mr. Tang You Qing said he will ask ZPMC to find the heat straightening document. Approximately twenty minutes later Mr. Tang You Qing informed this QA Inspector that ZPMC is performing heat straightening in accordance with heat straightening document #8331 and the document is now located on the deck plate that is being heat straightened. This QA Inspector performed random dimensional measurements and observed the mismatch between the two deck plates in a few locations is approximately 8 mm and other locations the mismatch appears to be approximately 2 mm. See the photographs below for additional information. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. He Hanbi, stencil 202122 is using flux cored welding procedure WPS-B-T-2231-TC-U4b-F to make OBG corner assembly weld CA3007-003. This QA Inspector observed that Mr. He Hanbi appears to be certified to make this weld. This QA Inspector observed a welding current of approximately 290 amps and 29.0 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xi Xianyou, stencil 047866 is using flux cored welding procedure WPS-B-T-2231-TC-U4b-F to make OBG corner assembly weld CA3010-003. This QA Inspector observed that Mr. Xi Xianyou appears to be certified to make this weld. This QA Inspector observed a welding current of approximately 295 amps and 30.0 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Hue Junrong, stencil 201215 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to make OBG weld repair SEG3006T-129 This weld is located in OBG segment 12CW and QC Inspector Mr. Tao Wei indicated this weld repair is being performed due to ultrasonic (UT) rejections. This QA Inspector observed the UT report does not have any date or other tracking number assigned. This QA Inspector observed a welding current of approximately 285 amps and 29.0 volts and the base material appears to have been being preheated by a torch prior to welding. This QA Inspector observed that Ms. Hue Junrong appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Hue Junrong, stencil 201215 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to make OBG weld repair SEG3006T-129 This weld is located in OBG segment 12CW and QC Inspector Mr. Tao Wei indicated this weld repair is being performed due to ultrasonic (UT) rejections. This QA Inspector observed the UT report does not have any date or other tracking number assigned and there are no "Y" location numbers written on the UT rejection report. This QA Inspector observed a welding current of approximately 285 amps and 29.0 volts and the base material appears to have been being preheated by a torch prior to welding. This QA Inspector observed that Ms. Hue Junrong appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

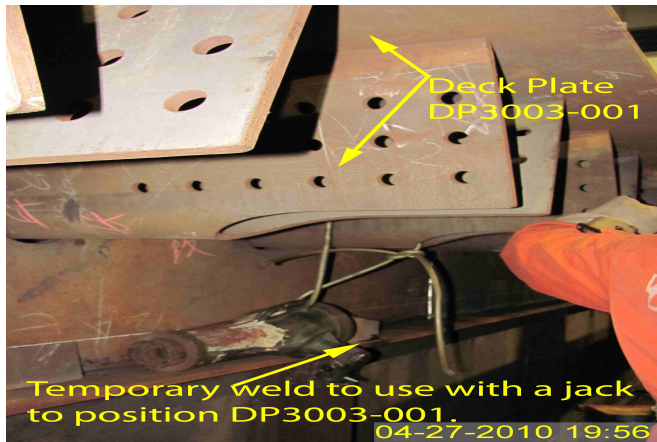
This QA Inspector observed ZPMC welder Mr. Wang Bin, stencil 048696 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to make OBG weld repair SEG3006T-129 This weld is located in OBG segment 12CW and QC Inspector Mr. Tao Wei indicated this weld repair is being performed due to ultrasonic (UT) rejections. This QA Inspector observed the UT report does not have any date or other tracking number assigned

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and there are no “Y” location numbers written on the UT rejection report. This QA Inspector observed a welding current of approximately 285 amps and 29.5 volts and the base material appears to have been being preheated by a torch prior to welding. This QA Inspector observed that Mr. Wang Bin appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Chang Ming, stencil 047864 is using shielded metal arc welding process to complete a repair weld on corner assembly CA3011 in the 2G (horizontal) position. This QA Inspector measured a welding current of approximately 160 amps and that Mr. Wang Chang Ming appears to be certified to perform this welding. Mr. Wang Chang Ming informed this QA Inspector that prior to welding that this weld repair area had been preheated with a torch. This observation was performed at approximately 2100 hours and this QA Inspector was not able to locate any ZPMC QC or ABF representatives to provide welding numbers. Items observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
